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BRAKE CONTROLS AND ACTUATION

INTEGRATED POWER BRAKE UNIT – RIGHT HAND DRIVE (G2484979)

mcx30.com

REMOVAL AND INSTALLATION

GENERAL EQUIPMENT

EQUIPMENT NAME
Jaguar Land Rover approved diagnostic equipment
Oil syringe

PART(S)

STEP	PART NAME	QUANTITY
Installation Step 2	Brake pedal mounting nut(s)	4
Installation Step 2	Brake booster to brake pedal pin	1

REMOVAL

⚠ CAUTIONS:

- Before disconnecting any components, make sure the area is clean and free from foreign material. When disconnected all openings must be sealed.
- Brake fluid will damage paint finished surfaces. If spilled, immediately remove the fluid and clean the area with water.
- Be prepared to collect escaping fluids.
- In order to avoid any accidental damage, or contamination make sure that the Integrated Power Brake module is only removed from the packing before the actual installation of the component.
- Check for any visible damage to the Integrated Power Brake module, if any signs of damage shown DO NOT install the component.
- If the integrated power brake module is dropped from any height DO NOT install the component.

⚠ NOTE:

- This procedure contains some variation in the illustrations depending on the vehicle specification, but the essential information is always correct.
- This procedure contains illustrations showing certain components removed to provide extra clarity.

1. Connect the Jaguar Land Rover (JLR) approved diagnostic equipment and set the Integrated Power Brake module to the assembly mode.

General Equipment: [Jaguar Land Rover approved diagnostic equipment](#)

2. Disconnect startup battery ground cable.

Refer to: [Startup Battery Disconnect and Connect](#) (414-00 Battery and Charging System - General Information, General Procedures).

3. Remove the instrument panel lower trim.

Refer to: [Instrument Panel Lower Trim](#) (501-12 Instrument Panel and Console, Removal and Installation).

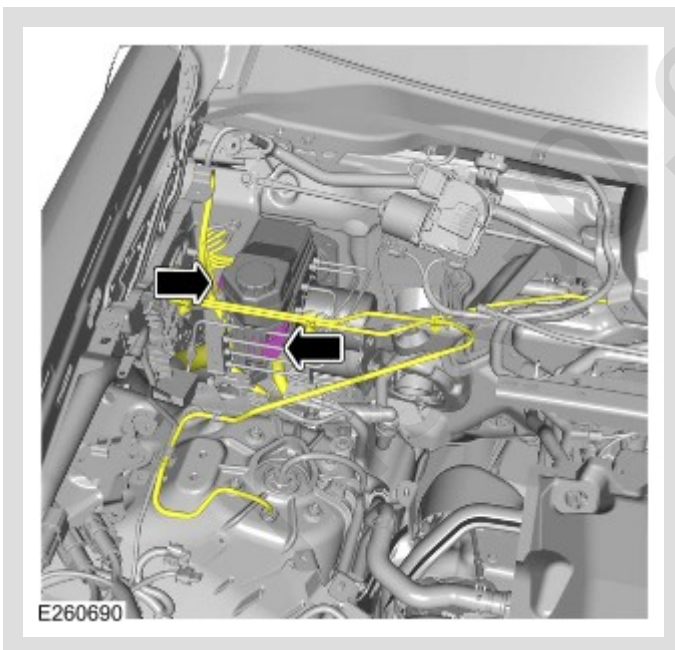
4. Remove the Fuel Fired Booster Heater (FFBH).

Refer to: [Fuel Fired Booster Heater](#) (412-02 Auxiliary Climate Control, Removal and Installation).

5. Use a suitable syringe to remove the brake fluid from the brake fluid reservoir.

General Equipment: [Oil syringe](#)

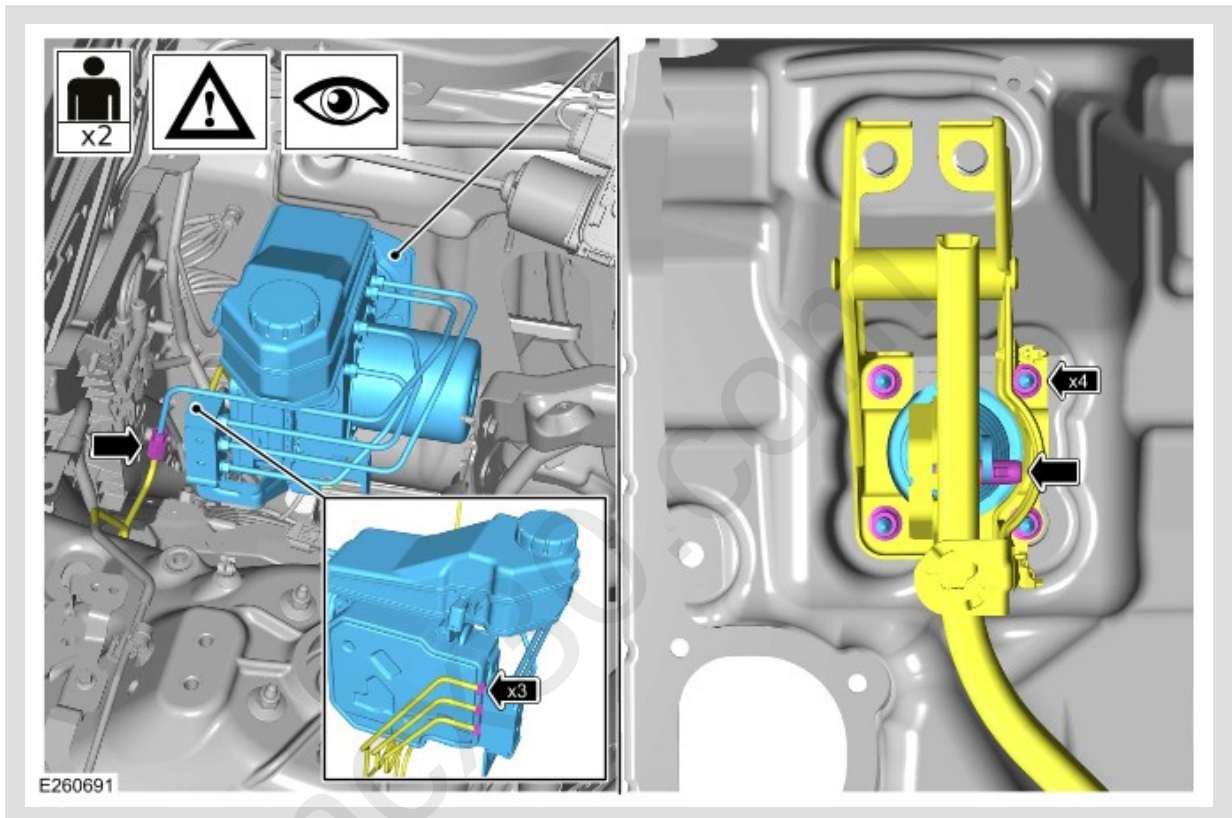
- 6.



- Position the air suspension pipes to one side to aid the removal of the component.
- Disconnect the 2 electrical connectors.

⚠ CAUTIONS:

- Note the correct order and orientation of the brake pipes prior to the removal of the components.
- Fluid loss is unavoidable, use absorbent cloth or a container to collect the fluid.
- Care must be taken not to damage the brake pipes during removal.
- The assistance of an other technician is necessary for this step.
- The integrated power brake unit must be held in place while the retaining nuts are removed.
Failure to follow this instruction might result in damage to the component.



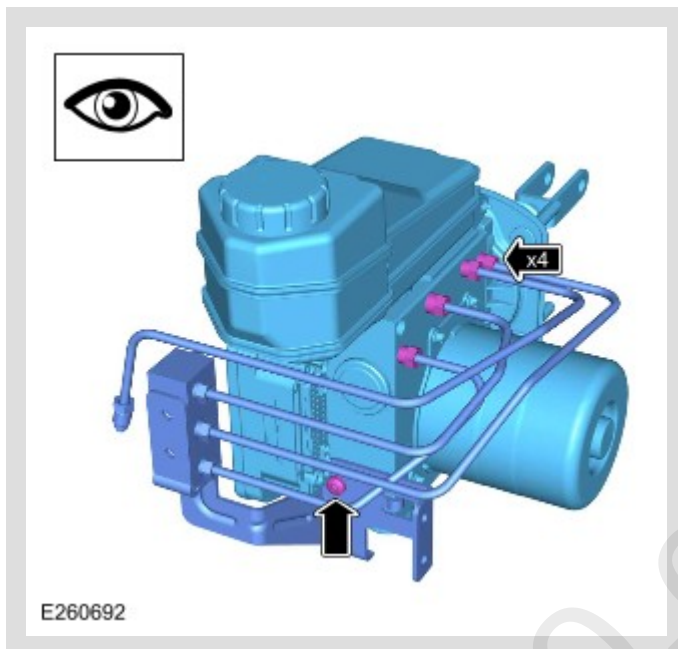
- Release the 4 brake pipe unions.
- Remove and discard the integrated power brake unit push rod to brake pedal pin.
- With assistance, remove and discard the 4 nuts.
- Remove the integrated power brake unit.

⚠ CAUTION:

Note the correct order and orientation of the brake pipes prior to the removal of the components.

⚠ NOTE:

Do not disassemble further if the component is removed for access only.

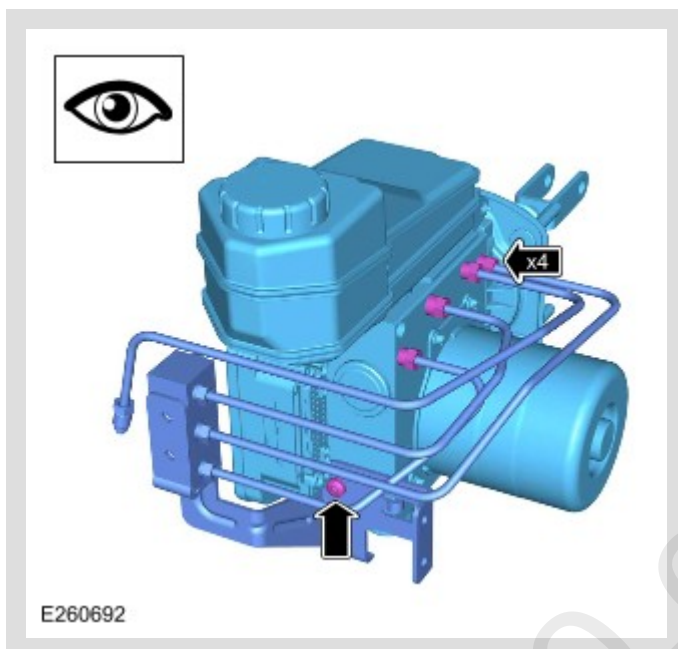


- Remove the bolt.
- Remove the bracket and the 4 brake pipes.

1.

⚠ CAUTION:

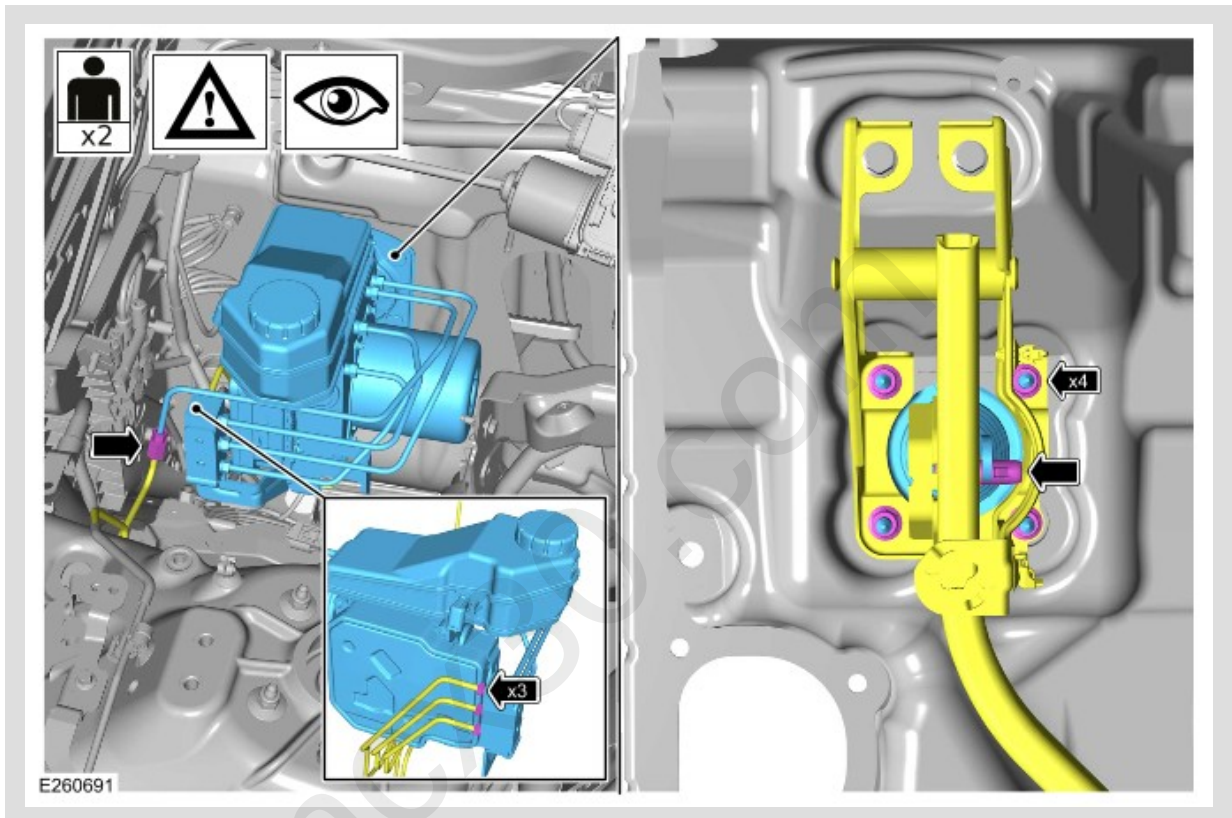
Make sure the brake pipes are installed in the correct order and orientation.



- Install the bracket and pipe assembly and tighten the bolt.
Torque: 9Nm
- Connect and tighten the 4 brake pipe unions.
Torque: 17.5Nm

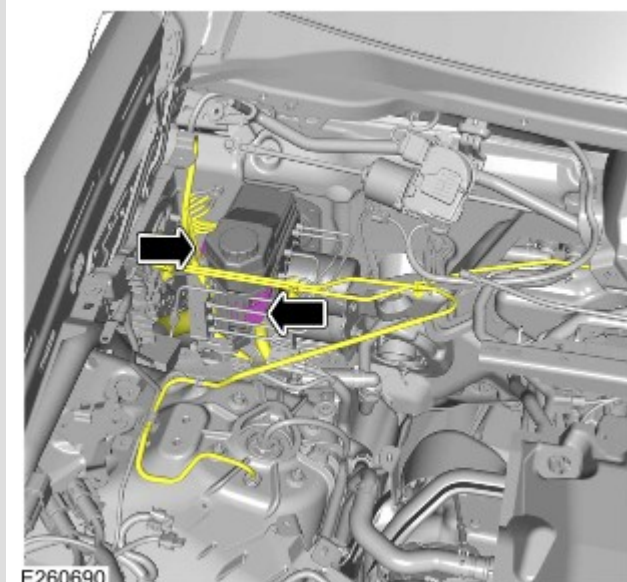
⚠ CAUTIONS:

- The assistance of an other technician is necessary for this step.
- Make sure that the brake pipes are installed in the noted order prior to removal.
- The integrated power brake unit must be held in place while the retaining nuts are installed. Failure to follow this instruction might result in damage to the component.
- Take extra care not to damage the push rod boot.
- Make sure that the mating faces are clean and free of any foreign material.



- With the assistance of an other technician, install the integrated power brake unit.
- Install and tighten the 4 new nuts.
Renew Part: [Brake pedal mounting nut\(s\)](#) Quantity: 4.
Torque: 26Nm
- Install a new integrated power brake unit push rod to brake pedal pin.
Renew Part: [Brake booster to brake pedal pin](#) Quantity: 1.
- Connect and tighten the 4 brake pipe unions.
Torque: 17.5Nm

3.



- Connect the 2 electrical connector.
- Reposition the air suspension lines to the original position.

4.

Install the FFBH.

Refer to: [Fuel Fired Booster Heater](#) (412-02 Auxiliary Climate Control, Removal and Installation).

5.

⚠ CAUTION:

Make sure that the integrated power brake and the surroundings are clean and free of any foreign material.

Remove the brake fluid reservoir cap and fill the brake fluid reservoir with the required amount of brake fluid.

Refer to: [Specifications](#) (206-00 Brake System - General Information, Specifications).

6.

Install the instrument panel lower trim.

Refer to: [Instrument Panel Lower Trim](#) (501-12 Instrument Panel and Console, Removal and Installation).

7.

Connect the startup battery ground cable.

Refer to: [Startup Battery Disconnect and Connect](#) (414-00 Battery and Charging System - General Information, General Procedures).

8.

Connect the JLR approved diagnostic equipment and download the software calibration to the Integrated Power Brake unit.

General Equipment: [Jaguar Land Rover approved diagnostic equipment](#)

9. Bleed the brake system.

Refer to: [Brake System Bleeding Fixed Caliper](#) (206-00 Brake System - General Information, General Procedures).

Refer to: [Brake System Bleeding Floating Caliper](#) (206-00 Brake System - General Information, General Procedures).

10. Connect the JLR approved diagnostic equipment and complete the 'Leakage And Air Monitoring' procedure.

General Equipment: [Jaguar Land Rover approved diagnostic equipment](#)

11. Use the JLR approved diagnostic equipment to complete the 'Pipe Correlation' test.

General Equipment: [Jaguar Land Rover approved diagnostic equipment](#)

- 12.
- If both the 'Pipe Correlation' and 'Leakage And Air Monitoring' test was completed successfully proceed to **step 16**.
 - If the 'Pipe Correlation' test was completed successfully but the 'Leakage And Air Monitoring' test failed proceed to **step 13**.

 NOTE:

If the 'Pipe Correlation' test could not be completed successfully, check for the order of the brake pipes.

If the 'Pipe Correlation' test was not completed successfully, check for possible reasons of failure, rectify and repeat the procedure from **step 9**.

13. Use the JLR approved diagnostic equipment to complete the 'Repair Bleed' procedure.

Refer to: [Brake System Bleed with Diagnostic Equipment](#) (206-00 Brake System - General Information, General Procedures).

14.

 NOTE:

'Leakage And Air Monitoring' test is a part of the 'Repair Bleed' procedure.

If the 'Leakage And Air Monitoring' part of the 'Repair Bleed' procedure was not completed successfully, check for possible reasons of failure, rectify and repeat the procedure from **step 9**.

- If the 'Repair Bleed' procedure was completed successfully proceed to the **next step**.

15.

 CAUTION:

After the successful completion of the 'Repair 'Bleed' procedure allow 10 minutes for the Integrated Power Brake unit to cool down before proceeding to the next step. Failure to follow this instruction might result in damage to the component.

Wait a minimum of 10 minutes before proceeding to the next step.

16. Use the JLR approved diagnostic equipment to complete the 'Valve Comfort Pulse - Calibration' procedure.

General Equipment: [Jaguar Land Rover approved diagnostic equipment](#)

17. Use the JLR approved diagnostic equipment to complete the 'Electric Park Brake - Calibration' procedure.

General Equipment: [Jaguar Land Rover approved diagnostic equipment](#)

18. Use the JLR approved diagnostic equipment to disable the integrated power brake unit assembly mode.

General Equipment: [Jaguar Land Rover approved diagnostic equipment](#)

19.

- Close the hood and all the doors and lock the vehicle.
- Wait for the hazard warning lamp switch back light to extinguish.
- Wait a further 20 seconds.
- Unlock the vehicle.
- Turn the ignition on.

20.

 CAUTION:

If the following procedure could not be completed successfully check for possible reasons of failure, rectify and retest the system.

Use the JLR approved diagnostic equipment to clear Diagnostic Trouble Code(s) (DTC) memory and check that no new DTC are stored.

General Equipment: [Jaguar Land Rover approved diagnostic equipment](#)